



State of Nevada – Department Of Personnel

CLASS SPECIFICATION

<u>TITLE</u>	<u>GRADE</u>	<u>EEO-4</u>	
<u>CODE</u>			
ELECTRONICS TECHNICIAN III	33	C	6.987
ELECTRONICS TECHNICIAN II	31	C	6.981
ELECTRONICS TECHNICIAN I	28	C	6.988

SERIES CONCEPTS

This class series encompasses positions that perform electronic technician work requiring the application of electronic principles and practices involving the installation, maintenance calibration, repair and modification of a variety of electronic and computerized equipment.

Incumbents install, assemble, adjust, clean, calibrate and repair electronic equipment including test equipment, computers, monitors, radios, televisions, video and audio equipment, alarm systems, telephone interconnect and switching equipment, data terminals and printing systems, grounding systems and surge protection equipment using a variety of test equipment.

Incumbents repair and align units and systems down to component or module level and troubleshoot electrical and other ancillary equipment using test equipment such as oscilloscopes, digital multimeters, telephone test sets, current power and voltmeters, measuring test sets, sweep generators, curve testers, tuning and adjusting tools, microcomputers (PC) and microprocessors diagnostic programs and various hand and power tools in order to keep equipment operational.

Incumbents repair, calibrate and maintain test equipment listed above using applied theory and tools in order to assure continued ability to maintain equipment down to component level.

Incumbents install cabling and cable distribution systems in division facilities allowing telephone, data systems to be inter-connected and distributed to offices and buildings as necessary.

Incumbents are responsible for their assigned inventory of parts and equipment and maintain replacement and repair stock by researching part numbers, descriptions, and prices. Coordinates with vendors, private industry, federal and state agencies in the purchase, repair, maintenance and modification of the agency's electronic and computerized equipment.

Incumbents prepare and maintain all documentation of work completed, associated files and vendor information for the assigned work area in order to provide a tracking system for completed maintenance and installation. Establish and update records and schematics pertaining to equipment installed and maintained. Perform software and configuration changes and updates.

Incumbents assist agency staff with equipment usage and technical problems regarding equipment failures.

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SERIES CONCEPT (cont.)

Independently develops custom circuit boards and sub-systems to provide necessary components which are unavailable from commercial sources or which require modification for use with existing components and systems to facilitate reliable, efficient, cost effective service to the agency.

DISTINGUISHING CHARACTERISTICS:

Positions allocated to the Electronics Technician series do not require FCC licensing or a certificate of competency as a condition of employment.

CLASS CONCEPTS

ELECTRONICS TECHNICIAN III

Under general direction, performs the full range of duties in the series concept and performs the full range of duties described in the series concept and in addition, supervises a staff of electronic technicians including prioritizing and scheduling of work, inventory and cost estimations on a division or agency wide basis.

Performs comparative analysis of existing equipment with proposed improvements to ensure compatibility of old and new system parts, technology and techniques and adapts the new system to improve reliability, efficiency and cost effectiveness.

Develops and implements technical parameters and standard practices for the installation, maintenance, calibration and repair of electronic and computerized equipment to ensure the reliability of the equipment and system is maintained.

Performs needs analysis and writes detailed plans and other documentation to meet identified needs including annual work plans, improvements and strategy.

ELECTRONICS TECHNICIAN II

Under direction, at the journey level, performs the full range of duties in the series concept regarding the installation, repair and maintenance of an agency's electrical and computerized equipment.

May act as a lead worker over lower level electronic technicians and/or function independently with district or division wide responsibility for providing maintenance, calibration, repair and modification of a variety of electrical, computerized and mechanical equipment.

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CLASS CONCEPTS (cont.)

ELECTRONICS TECHNICIAN I

Under direction supervision, receives training in the performance of all or part of the duties outlined in the series concept.

This is the entry level in the series and provides for progression to the Electronics Technician II level upon satisfactory completion of the probationary period meeting the minimum requirements and with the recommendation of the hiring authority.

MINIMUM QUALIFICATIONS

ELECTRONICS TECHNICIAN III:

EDUCATION AND EXPERIENCE:

I

Graduation from an accredited college or technical school with an Associate's degree in electronics and three years of related experience performing electronic technician work requiring the application of electronic principles and practices involving the installation, maintenance, calibration, repair and modification of a variety of electrical and computerized equipment; OR

II

High school and five years of related experience as described in option I; OR

III

Two years of experience at the Electronics Technician II level in Nevada State service; OR

IV

An equivalent combination of education and experience in which the applicant has demonstrated possession of the entry level knowledge, skills and abilities.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES: (These may be acquired on the job and/or are needed to perform the work assigned.)

Knowledge of the functions of the different divisions of the department to obtain needed information and/or where to direct questions. Knowledge of department policy and procedure as applied to assigned projects. General knowledge of personnel principles and practices. Knowledge of state and/or agency purchasing rules and regulations.

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MINIMUM QUALIFICATIONS (cont.)

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES: (cont.)

Ability to coordinate work assignments with agency staff and subordinates. Ability to supervise the activities of assigned staff including project scheduling, delegating responsibility, providing training, and evaluating effectiveness. Ability to resolve problems diplomatically with the agency staff, vendors, contractors and the general public. Ability to analyze information, problems, situations, practices, and procedures to define problem areas and formulate logical and objective solutions. Ability to supervise and provide direction for the installation, maintenance and repair of a variety of complex electronic equipment or related assignments.

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES: (Applicants will be screened for possession of these through written, oral, performance or other evaluation procedures.)

Working knowledge of video theory, principles of telephone operations, and of data networks.

Ability to establish rapport with system users and service vendors. Ability to install, operate and troubleshoot personal computers and diagnostic software, operating systems, and interfacing hardware. Ability to accurately convey equipment problems to agency staff and service vendors regarding warranties and repairs. Ability to determine the most cost effective and efficient method for the repair or replacement of equipment and parts. Ability to utilize diagnostic software to solve hardware problems. Ability to determine cabling installation and network needs according to system requirements. Ability to provide direction and training to lower level technicians.

In addition, all other knowledge, skills and abilities required at the lower level in this series.

ELECTRONICS TECHNICIAN II:

EDUCATION AND EXPERIENCE:

I

Graduation from an accredited college or technical school with an Associate's degree in electronics and one year of related experience performing electronic technician work requiring the application of electronic principles and practices involving the installation, maintenance, calibration, repair and modification of a variety of electrical and computerized equipment; OR

II

High school and three years of related experience as described in option I; OR

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MINIMUM QUALIFICATIONS (cont.)

EDUCATION AND EXPERIENCE: (cont.)

III

One year of experience at the Electronics Technician I level in Nevada State service; OR

IV

An equivalent combination of education and experience in which the applicant has demonstrated possession of the entry level knowledge, skills and abilities.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES: (These may be acquired on the job and/or are needed to perform the work assigned.)

Knowledge of the functions of the different divisions of the department to obtain needed information and/or where to direction questions. Knowledge of department policy and procedure as applied to assigned projects. Knowledge of state and/or agency purchasing rules and regulations. Working knowledge of video theory, principles of telephone operations and of data networks.

Ability to establish rapport with system users and service vendors. Ability to install, operate and troubleshoot personal computers and diagnostic software, operating systems, and interfacing hardware. Ability to accurately convey equipment problems to agency staff and service vendors regarding warranties and repairs. Ability to determine the most cost effective and efficient method for the repair or replacement of equipment and parts. Ability to utilize diagnostic software to solve hardware problems. Ability to determine cabling installation and network needs according to system requirements. Ability to provide direction and training to lower level technicians.

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES: (Applicants will be screened for possession of these through written, oral, performance or other evaluation procedures.)

Knowledge of multiplexer principles. Knowledge of modulation principles. Knowledge of power supplies and filtering systems. General knowledge of analog and digital transmission principles. Knowledge of modem operation principles. Knowledge of rechargeable battery maintenance. Knowledge of soldering and desoldering techniques utilizing various types of soldering irons, fluxes, solder, and solvents. Knowledge of analog and electronic theory. Knowledge of safety procedures necessary when working with sensitive electronics, high voltage and hazardous chemicals.

Ability to organize material, information and people in a systematic way to optimize efficiency and minimize duplication of effort. Ability to work independently and follow through on assignments. Ability to perform under the stress of frequent interruptions often changing from one task to another. Ability to repair and troubleshoot microprocessors. Ability to troubleshoot and repair electronic equipment down to component level. Ability to prioritize assignments to complete work

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MINIMUM QUALIFICATIONS (cont.)

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES: (cont.)

in a timely manner. Ability to fabricate printed circuit assemblies including layout, soldering and wire wrapping. Ability to establish and maintain alpha numeric files for budgets, vendor accounts, technical reference and inventory control. Ability to maintain an appropriate stock of inventory parts and supplies. Ability to write grammatically correct business correspondence and reports.

In addition, all other knowledge, skills and abilities required at the lower level in this series.

ELECTRONICS TECHNICIAN I:

EDUCATION AND EXPERIENCE:

I

Graduation from an accredited college or technical school with an Associate's degree in electronics;
OR

II

High school and two years of related experience performing electronic technician work requiring the application of electronic principles and practices involving the installation, maintenance, calibration, repair and modification of a variety of electrical and computerized equipment; OR

III

An equivalent combination of education and experience in which the applicant has demonstrated possession of the entry level knowledge, skills and abilities.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES: (These may be acquired on the job and/or are needed to perform the work assigned.)

Knowledge of multiplexer principles. Knowledge of modulation principles. Knowledge of modem operation principles. Knowledge of safety procedures necessary when working with sensitive electronics, high voltage and hazardous chemicals. Knowledge of the functions of the different divisions of the department to obtain needed information and/or where to direct questions. Knowledge of department policy and procedure as applied to assigned projects.

Ability to establish rapport with system users and service vendors. Ability to accurately convey equipment problems to agency staff and service vendors regarding warranties and repairs. Ability to work as part of a team. Ability to work independently and follow through on assignments. Ability to perform under the stress of frequent interruptions often changing from one task to another.

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MINIMUM QUALIFICATIONS (cont.)

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES: (Applicants will be screened for possession of these through written, oral, performance or other evaluation procedures.)

Working knowledge of electronic theory, principles and practices to include AC/AD, solid state, integrated circuits, microprocessor devices, conventional symbols and sources of information. Working knowledge of electronic components, color codes and power ratings. Knowledge of power supplies and filtering systems. General knowledge of analog and digital transmission principles. Knowledge of analog and electronic theory.

Ability to add, subtract, multiply and divide whole numbers, fractions and decimals. Ability to solder and remove electronic components from printed circuit boards to repair and modify electronic equipment. Ability to utilize a variety of electronic test equipment and tools such as oscilloscopes, digital voltmeters, signal generators, etc., in the maintenance and repair of electronic equipment. Ability to read and interpret mechanical and electrical drawings and schematics for associated electronic equipment. Ability to operate common power and hand tools. Ability to establish and maintain alpha numeric files for budgets, vendor accounts, technical reference and inventory control. Ability to prepare maintenance and repair logs.

This class specification is used for classification, recruitment and examination purposes. It is not to be considered a substitute for work performance standards for positions assigned to this class.

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ESTABLISHED:	7/1/93P 8/31/92PC	4/1/68	7/1/93P 8/31/92PC
REVISED:		11/16/72	
REVISED:		7/1/91P	
		11/29/90PC	
REVISED:		7/1/93P	
		8/31/92PC	